



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/561,246

05/01/2006

Hideki Sato

31238-226496

5994

26694

7590

07/22/2008

VENABLE LLP

P.O. BOX 34385

WASHINGTON, DC 20043-9998

EXAMINER

CHEN, KEATH T

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

07/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION
Response to Arguments

1. Applicants' arguments filed 06/27/2008 have been fully considered but they are not persuasive.
2. In regarding to 35 USC 103(a) rejection of claims 1-2 based on Harano '922, Ichikawa '868, and Shintani '157, see pages 2-9, Applicants' arguments are: a) '922 fails to disclose two sorts of metals, see the last sentence of the 2nd paragraph on page 3; b) "It is the Examiner's position that the two films produced by '868 meets the recited claim language ...", see the 2nd sentence of the 2nd paragraph on page 3; c) '868's teaching of "plasma is stabilized", see the 3rd sentence of the 2nd paragraph on page 3 and forming two different layer of films is the claimed invention avoids, see the last two lines of page 3; d) '868 teaching of increasing RF power for plasma has nothing to do with melting raw material, see the last sentence of the 2nd paragraph on page 4; e) '157 is not concerned with the problem faced by Applicants, see the second paragraph of page 5, and there is no mention of an unmelted portion of the raw material during the process disclosed by '157, see the sentence after the middle indent on page 5.

These arguments are found not persuasive because:

- a) '922, col. 1, lines 8-9 disclosed films that requires two sorts of metals (e.g. ZnO:Al).
- b) The examiner is not counting on forming of two films to meet the claim limitation. Instead, the examiner is counting on the combination of '922, '868, and '157 to meet the claim limitation. In respect to '868, the examiner is counting on '868's teaching that at the early stage of film formation, the RF power needs to be increase to

achieve uniformity until the second stage is reached. The growth at the second stage is not of concern in this rejection.

c) In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

'868 teaches that at the early stage of film formation, the RF power needs to be increase to achieve uniformity. This is the learning used in combination with '922 and '157. Again, the second stage with stabilized plasma and producing the second film layer is not relevant to the rejection.

d) '922 teaches "the hearth 4 has a positive potential to the plasma gun 1, whereby the vapor deposition material 3 is heated and evaporated mainly by the electrons in the plasma" (col. 4, lines 38-40). By the teaching of '868 of increasing plasma power (at the first stage of film formation), the combination clearly teach "sequentially increased electric power supply ... to evaporate the material" of claim 1.

The examiner appreciates Applicants' providing publication 1-6-3. The examiner considers that the plasma in Fig. 1 of 1-6-3 can contribute to the melting of material #3.

e) In response to applicant's argument that '157 does not solve the problem of the instant application, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

'157 and '922 are analogous art of physical deposition. '922 concerns with film uniformity (col. 14, lines 9-13) and so does '157 (abstract). A person of ordinary skill in the art would have known to combine '157 with '922 for uniform coating, at least for single metal coatings. '922 also teaches the need to coat films with two sorts of metals (col. 1, lines 8-9; col. 10, lines 26-27). In this combination, by moving magnets #6a-d in Fig. 2 of '157 outward, an unmelted portion of the raw material is melted during the process. The motivation to move magnets #6a-d outward for two metal coating was obvious to maintain film uniformity. At least '157 teaches which direction to move depends on application ([0015]). In addition, there are only two ways (moving in vs. moving out) to try which would have produced better film uniformity.

3. In regarding to 35 USC 103(a) rejection of claim 3, see page 7, Applicants' argument is based on the patentability of the parent claim. Since the parent claim is found not patentable, the dependent claim 3 is not patentable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keath T. Chen whose telephone number is 571-270-1870. The examiner can normally be reached on M-F, 8:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone

Art Unit: 1792

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. T. C./
Examiner, Art Unit 1792

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792